

1 6. The automated system of claim 3, further comprising a holding station for
2 holding a plurality of reaction receptacles.

1 7. The automated system of claim 2, wherein said separation station comprises
2 magnetic elements for subjecting the contents of the reaction receptacle to a magnetic field
3 during at least a portion of the separation procedure.

1 8. The automated system of claim 2, wherein said separation station includes a fluid
2 aspirator mechanism constructed and arranged to aspirate fluid sample from the reaction
3 receptacle after isolating the solid support material.

1 9. The automated system of claim 7, said separation station further comprising:
2 a fluid dispense mechanism constructed and arranged to provide a wash buffer to the
3 reaction receptacle after removing the fluid sample from the reaction receptacle; and
4 a mixing device constructed and arranged to agitate the reaction receptacle to resuspend
5 the solid support material after a wash buffer is provided by said fluid dispense mechanism.

1 10. The automated system of claim 3, wherein the incubators of said amplifying
2 incubation station are maintained at a temperature or temperatures different than the temperature
3 or temperatures maintained by the incubators of said immobilizing incubation station.

1 11. The automated system of claim 2, further comprising a hybridizing incubation
2 station comprising one or more incubators, each said incubator of said hybridizing incubation
3 station defining a temperature-controlled chamber constructed and arranged to receive the
4 reaction receptacle and incubate the contents of the reaction receptacle, to which one or more
5 probe reagents have been provided, for a period of time and under conditions sufficient to permit
6 the probe to hybridize to the target sequence or an amplicon thereof.

1 12. The automated system of claim 11, wherein said amplifying and hybridizing
2 incubation stations are independent of one another or share at least one incubator in common.

1 13. The automated system of claim 11, wherein said amplifying and hybridizing
2 incubation stations are independent of one another.

1 14. The automated system of claim 11, further comprising a detection station
2 constructed and arranged to detect the presence or absence of the probe hybridized to the target
3 sequence, or an amplicon thereof, as an indication of the presence or absence of an organism or
4 one or more members of a group of organisms in the fluid sample.

1 15. The automated system of claim 14, wherein said detection station comprises a
2 luminometer constructed and arranged to detect the amount of light emitted by the contents of
3 the reaction receptacle.

1 16. The automated system of claim 2, further comprising a temperature ramping
2 station constructed and arranged to raise or lower the temperature of the contents of the reaction
3 receptacle prior to transporting the reaction receptacle to said amplifying incubation station.

1 17. The automated system of claim 2, further comprising a fluid dispensing station
2 constructed and arranged to dispense a fluid sample into the reaction receptacle.

1 18. The automated system of claim 2, further comprising a deactivation station
2 constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after
3 permitting the target sequence to be amplified.

1 19. The automated system of claim 14, further comprising a deactivation station
2 constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after
3 permitting the target sequence to be amplified.

1 20. The automated system of claim 3, further comprising a hybridizing incubation
2 station comprising one or more incubators, each said incubator of said hybridizing incubation
3 station defining a temperature-controlled chamber constructed and arranged to receive the
4 reaction receptacle and incubate the contents of the reaction receptacle, to which one or more

probe reagents have been provided, for a period of time and under conditions sufficient to permit the probe to hybridize to the target sequence or an amplicon thereof.

21. The automated system of claim 20, further comprising a detection station constructed and arranged to detect the presence or absence of the probe hybridized to the target sequence, or an amplicon thereof, as an indication of the presence or absence of an organism or one or more members of a group of organisms in the fluid sample.

22. The automated system of claim 21, further comprising a deactivation station constructed and arranged to deactivate the nucleic acid contents of the reaction receptacle after permitting the target sequence to be amplified.